Designing and Building an Intelligent Device for Eye Disorder Treatment

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This project is an invention of a training device that provides treatment for eye disorders such as Strabismus and Amblyopia. The device can perform eye movement exercises prescribed by ophthalmologists. It renders accurate, versatile, and user-friendly training options for patients. This device will also allow doctors to customize vision therapies for each patient. Advanced technologies including microcontrollers, Computer Aided Design (CAD), 3D printing, computer programming, and electronic circuit design are used within this device. The device is tested by a 6-year-old patient who is undergoing manually conducted eye exercises prescribed by an ophthalmologist. Use of this device will help to achieve optimum treatment result. This invention makes it possible for ophthalmologists to design and test advanced therapies which can not be carried out by traditional methods. This invention is low cost, and can benefit over 330 million potential patients worldwide, especially children who are eager to find a practical solution to treat eye disorders or improve their general eye health.

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